

## SGCN and Habitat Stressors

### Level 1 Threat Natural Systems Modifications

### Level 2 Threat: Dams and Water Management-Use

**Description:** Changing water flow patterns from their natural range of variation either deliberately or as a result of other activities

Species Associated With This Stressor:		Total SGCN: 1: 19 2: 15 3:
Class	<i>Actinopterygii</i> (Ray-finned Fishes)	SGCN Category
Species: <i>Alosa pseudoharengus</i> (Alewife)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Dams can completely block access to spawning grounds. While fishways can provide upstream access around dams, they may not pass all species effectively and/or may fall into disrepair without active maintenance. Actionability is moderate - proactive dam removal happens infrequently (not a high likelihood or certainty), but new small dam construction is slowing. Spatial extent is entire state.		
Species: <i>Anguilla rostrata</i> (American Eel)		2
Severity: Severe	Actionability: Actionable with difficulty	
Notes: Eel mortality during downstream migration at hydropower facilities can be high. Maintaining adequate upstream and downstream passage at dams can be challenging.		
Species: <i>Alosa sapidissima</i> (American Shad)		1
Severity: Severe	Actionability: Moderately actionable	
Notes: Dams can completely block access to spawning grounds. While fishways can provide upstream access around dams, they may not pass all species effectively and/or may fall into disrepair without active maintenance. Actionability is moderate - proactive dam removal happens infrequently (not a high likelihood or certainty), but new small dam construction is slowing. Spatial extent is entire state.		
Species: <i>Salvelinus alpinus oquassa</i> (Arctic Charr)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Floods Pond population only - currently adequately mitigated but will always remain a public water supply.		
Species: <i>Salmo salar</i> (Atlantic Salmon)		1
Severity: Severe	Actionability: Moderately actionable	
Notes: Dams hinder downstream fish passage and can block upstream fish passage. Dams also alter the natural flow and create habitat for predator. The likelihood of removing a hydropower dam is low, while the likelihood of removing a non-hydro dam can be high. In most cases, the installation of up and downstream fish passage will moderate the impact. Spatial extent is entire state of Maine		
Species: <i>Acipenser oxyrinchus</i> (Atlantic Sturgeon)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Some head of tide dams remain in Maine and limit or obstruct access to habitat. Dam removals on the Kennebec and Penobscot have already occurred and opened access to historical habitat, but the long-term effects of reduced habitat could be difficult to recover from.		
Species: <i>Alosa aestivalis</i> (Blueback Herring)		1
Severity: Severe	Actionability: Moderately actionable	
Notes: Dams can completely block access to spawning grounds. While fishways can provide upstream access around dams, they may not pass all species effectively and/or may fall into disrepair without active maintenance. Actionability is moderate - proactive dam removal happens infrequently (not a high likelihood or certainty), but new small dam construction is slowing. Spatial extent is entire state.		
Species: <i>Coregonus clupeaformis</i> (Lake Whitefish)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Lock Dam on Chamberlain Lake diverts flow from historical whitefish spawning trib to Telos Cut		

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Class	<i>Actinopterygii</i> (Ray-finned Fishes)	SGCN Category
Species: <i>Osmerus mordax</i> (Rainbow Smelt)		1
Severity: Severe	Actionability: Moderately actionable	
Notes: Dams at head of tide completely block access to spawning grounds. No fishway design has been proven to effectively pass smelt. Actionability is moderate - proactive dam removal happens infrequently (not a high likelihood or certainty), but new small dam construction is slowing. Spatial extent is entire state.		
Species: <i>Prosopium cylindraceum</i> (Round Whitefish)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Inappropriate water level management on lakes controlled by a dam.		
Species: <i>Acipenser brevirostrum</i> (Shortnose Sturgeon)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Some head of tide dams remain in Maine and limit or obstruct access to habitat. Dam removals on the Kennebec and Penobscot have already occurred and opened access to historical habitat, but the long-term effects of reduced habitat could be difficult to recover from.		
Species: <i>Morone saxatilis</i> (Striped Bass)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Some head of tide dams remain in Maine and limit or obstruct access to habitat. Dam removals on the Kennebec and Penobscot have already occurred and opened access to historical habitat, but the long-term effects of reduced habitat could be difficult to recover from.		
Species: <i>Etheostoma fusiforme</i> (Swamp Darter)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Town water supply and management issues associated with some darter habitats are a concern.		
Class	<i>Aves</i> (Birds)	SGCN Category
Species: <i>Chlidonias niger</i> (Black Tern)		2
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Can contribute to loss of nesting habitat, but also can create habitat - depends on specific management regime of each water control structure.		
Species: <i>Gallinula galeata</i> (Common Gallinule)		2
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Can contribute to loss of nesting/foraging habitat, but can also create habitat.		
Species: <i>Ixobrychus exilis</i> (Least Bittern)		1
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Can contribute to loss of nesting/foraging habitat, but can also create habitat.		
Species: <i>Ammodramus caudacutus</i> (Saltmarsh Sparrow)		1
Severity: Severe	Actionability: Moderately actionable	
Notes: Tidal restriction, tide gates, impoundments		
Species: <i>Cistothorus platensis</i> (Sedge Wren)		1
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Can contribute to loss of nesting habitat, but can also create habitat.		
Species: <i>Coturnicops noveboracensis</i> (Yellow Rail)		2
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Can contribute to loss of nesting/foraging habitat if focus on promoting deep water marsh rather than shallow water marsh, but can also create/improve habitat depending on management regime.		

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Class	<i>Bivalvia</i> (Marine And Freshwater Molluscs)	SGCN Category
Species: <i>Alasmidonta varicosa</i> (Brook Floater)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Species requires clean, flowing water; dams alter habitat, can block fish hosts and potentially fragment populations; drawdowns for dam maintenance and repair can cause direct mortality and downstream sedimentation; water withdrawals for irrigation or other large scale consumptive uses		
Species: <i>Leptodea ochracea</i> (Tidewater Mucket)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Dams alter habitat, can block fish hosts and potentially fragment populations; can also create habitat; drawdowns for dam maintenance and repair can cause direct mortality and downstream sedimentation; water withdrawals for irrigation or other large scale consumptive uses		
Species: <i>Lampsilis cariosa</i> (Yellow Lampmussel)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Dams alter habitat, can block fish hosts and potentially fragment populations; can also create habitat; drawdowns for dam maintenance and repair can cause direct mortality and downstream sedimentation; water withdrawals for irrigation or other large scale consumptive uses		
Class	<i>Gastropoda</i> (Aquatic And Terrestrial Snails)	SGCN Category
Species: <i>Stagnicola mighelsi</i> (Bigmouth Pondsnail)		1
Severity: Severe	Actionability: Moderately actionable	
Notes: Alteration of water levels in lakes where this snail occurs may have lead to past extirpations		
Species: <i>Vertigo morsei</i> (Six-whorl Vertigo)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Alteration of hydrology at the single site in state for this snail is the single biggest possible threat. The site is protected but activity immediately offsite could compromise the wetland hydrology and quality.		
Class	<i>Insecta</i> (Insects)	SGCN Category
Species: <i>Ophiogomphus colubrinus</i> (Boreal Snaketail)		1
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Dams degrade habitat quality for many lotic species specialists		
Species: <i>Lycaena dorcas claytoni</i> (Clayton's Copper)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Eggs, larvae and host plant intolerant of prolonged/permanent inundation; water withdrawal for irrigation or other large consumptive uses can alter wetland hydrology		
Species: <i>Cicindela marginipennis</i> (Cobblestone Tiger Beetle)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Construction of a dams on the single river where this beetle occurs in Maine could have catastrophic results		
Species: <i>Enallagma laterale</i> (New England Bluet)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Vegetated littoral zones sensitive to water level manipulation		
Species: <i>Ophiogomphus howei</i> (Pygmy Snaketail)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Dams degrade habitat quality for many lotic species specialists		

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Class	<i>Insecta</i> (Insects)	SGCN Category
Species: <i>Gomphus quadricolor</i> (Rapids Clubtail)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Dams degrade habitat quality for many lotic species specialists		
Species: <i>Enallagma pictum</i> (Scarlet Bluet)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Vegetated littoral zones sensitive to water level manipulation		
Species: <i>Siphonisca aerodromia</i> (Tomah Mayfly)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Species requires seasonally flooded sedge meadows on streams and rivers; dams alter natural flooding regimen, permanently inundate riparian wetlands and alter habitat; water withdrawal for irrigation or other large scale consumptive uses		
Species: <i>Cicindela ancocisconensis</i> (White Mountain Tiger Beetle)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Construction of dams on rivers where this beetle occurs could have catastrophic effects on local populations		

Class	<i>Reptilia</i> (Reptiles)	SGCN Category
Species: <i>Glyptemys insculpta</i> (Wood Turtle)		1
Severity: Moderate Severity	Actionability: Moderately actionable	

### Habitats Associated With This Stressor:

Macrogroup	Glade, Barren and Savanna
Habitat System Name:	Central Appalachian Alkaline Glade and Woodland
Notes:	Excess water use draining aquifers
Macrogroup	Intertidal Tidal Marsh (peat-forming)
Habitat System Name:	Acadian Coastal Salt Marsh
Notes:	Maine's tidal marshes have been extensively ditched. Impacts are primarily historical, but restoration opportunities exist
Habitat System Name:	Coastal Plain Tidal Marsh
Notes:	Maine's tidal marshes have been extensively ditched. Impacts are primarily historical, but restoration opportunities exist
Macrogroup	Lakes and Ponds
Habitat System Name:	Eutrophic
Notes:	Most impacts from dams are historical but many opportunities exist for restoration or removal
Habitat System Name:	Mesotrophic or Intermediate
Notes:	Most impacts from dams are historical but many opportunities exist for restoration or removal
Habitat System Name:	Oligotrophic
Macrogroup	Northeastern Floodplain Forest
Habitat System Name:	Laurentian-Acadian Floodplain Systems
Notes:	Floodplain hydrology and vegetation may be altered by dam construction
Macrogroup	Northern Peatland & Fens
Habitat System Name:	Acadian Maritime Bog
Notes:	A number of peatlands are impacted by dams located on inlet or outlet tributaries

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##### Macrogroup Northern Peatland & Fens

###### Habitat System Name: Boreal-Laurentian Bog

**Notes:** A number of peatlands are impacted by dams located on inlet or outlet tributaries

###### Habitat System Name: Boreal-Laurentian-Acadian Acidic Basin Fen

**Notes:** A number of peatlands are impacted by dams located on inlet or outlet tributaries

###### Habitat System Name: Laurentian-Acadian Alkaline Fen

**Notes:** A number of peatlands are impacted by dams located on inlet or outlet tributaries

###### Habitat System Name: North-Central Interior and Appalachian Acidic Peatland

**Notes:** A number of peatlands are impacted by dams located on inlet or outlet tributaries

##### Macrogroup Northern Swamp

###### Habitat System Name: Acadian-Appalachian Conifer Seepage Forest

**Notes:** Dams impact many lakeshore swamps by affecting riparian hydrology

###### Habitat System Name: Laurentian-Acadian Alkaline Conifer-Hardwood Swamp

**Notes:** Dams impact many lakeshore swamps by affecting riparian hydrology

###### Habitat System Name: North-Central Appalachian Acidic Swamp

**Notes:** Dams impact many lakeshore swamps by affecting riparian hydrology

###### Habitat System Name: North-Central Interior and Appalachian Rich Swamp

**Notes:** Dams impact many lakeshore swamps by affecting riparian hydrology

###### Habitat System Name: Northern Appalachian-Acadian Conifer-Hardwood Acidic Swamp

**Notes:** Dams impact many lakeshore swamps by affecting riparian hydrology

##### Macrogroup Rivers and Streams

###### Habitat System Name: Large River

**Notes:** Most impacts from dams are historical but many opportunities exist for restoration or removal

###### Habitat System Name: Medium River

**Notes:** Most impacts from dams are historical but many opportunities exist for restoration or removal

###### Habitat System Name: Small River

**Notes:** Most impacts from dams are historical but many opportunities exist for restoration or removal

##### Macrogroup Subtidal Pelagic (Water Column)

###### Habitat System Name: Confined Channel

**Notes:** Where dams cut off tidal flow the habitat is completely altered and fish passage obstructed.

###### Habitat System Name: Nearshore

**Notes:** Where dams cut off tidal flow the habitat is completely altered and fish passage obstructed.

###### Habitat System Name: Offshore

**Notes:** Where dams cut off tidal flow the habitat is completely altered and fish passage obstructed.

###### Habitat System Name: Upwelling Zones

**Notes:** Where dams cut off tidal flow the habitat is completely altered and fish passage obstructed.

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*The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.*